9. Hepatitis A

(Notifiable)

Description: Hepatitis A virus (HAV) produces acute infection of the liver. Its public health importance lies in its ability to produce severe prolonged disease and explosive, extensive outbreaks. Ireland is a low incidence country. In developing countries asymptomatic infection occurs in childhood.

Annual Numbers: Between 30 and 50 cases per year.

Seasonal Distribution: There is no seasonal pattern of incidence.

Causative Agent: Hepatitis A virus (HAV) is a single stranded RNA virus. Infection with HAV induces lifelong immunity.

Reservoir: The gastrointestinal tracts of humans (and possibly certain primates including chimpanzees).

Transmission:
Primary: Person to person spread via the faeco-oral route. It is likely that less than 10% of cases are transmitted by food. Food vehicles most commonly associated include shellfish and garden produce.
Secondary: Ingestion of contaminated food or water.

Outbreak Potential: Hepatitis A has moderate outbreak potential if transmitted through food and person to person contact and a high outbreak potential if transmitted through water.

Incubation period: Long: mean period is 28 days (range 15-50 days). Larger inocula tend to lead to more rapid development of symptoms.

Period of communicability: From two weeks before the onset of jaundice until one week after. In anicteric patients, infectivity generally corresponds to period of peak levels of alanine transaminase (ALT). Prolonged viral excretion (for up to six months) can occur in infants and small children. The infectious dose is not known but is very probably low (10-100 virus particles). Faeces can contain up to 108 particles/ml just before and in the first week of jaundice.

Epidemiology: Hepatitis A virus is primarily spread from person to person via the faecal-oral route. Spread may also occur through food that has been contaminated by infected food handlers or by contaminated water. Shellfish that have been grown in waters contaminated with human faeces are a not uncommon source of extensive outbreaks of hepatitis A. Europe, Japan and North America are low prevalence regions (<2% Anti-HAV-Antibody) while Africa, Asia and Central/South America are high prevalence regions (>8% Anti-HAV-Antibody). Russia and Eastern Europe are intermediate prevalence regions.

Exposure-prone groups: Residents in institutions, men who have sex with men, returning travellers from areas of high endemicity, children in day care and their staff, and food handlers.

Clinical Features: Fever, nausea, loss of appetite and abdominal pain, are the commonest features. Jaundice follows between 3 and 5 days after. Many paediatric cases are asymptomatic; disease severity increases with age. Mortality is low, about 4/1000 cases in developed countries but rising to almost 20/1000 cases in those over 50. Acute liver failure is the most serious complication being commonest in those with underlying chronic liver disease.

Clinical Management of Cases: Enteric precautions until 1 week after onset of jaundice or 10 days from onset of symptoms.
The case should be notified to the local Department of Public Health. It is important to determine if the case is aware of similar cases suggesting the possibility of an outbreak. Determine if case is in a risk category.

Public Health Management of Cases: Collect risk factor data for 2-5 weeks prior to onset: contact with case, travel, seafood consumption, occupation, blood transfusions. Determine if linked cases.

Food Hygiene Implications: Food hygiene re-education is necessary for food handlers.

Public Health Management of Contacts: Clinical surveillance of contacts that shared food and drink, or had close household contact with a case during their period of communicability.

Post exposure prophylaxis with Hepatitis A vaccine is usually recommended for the management of contacts of cases and for outbreak control. Immunoprophylaxis should be given to household and close contacts of cases that have no previous history of hepatitis A vaccine or of laboratory confirmed hepatitis A infection as soon as possible after exposure to HAV. Full immunisation advice is available at http://www.hpsc.ie/hpsc/A-Z/VaccinePreventable/Vaccination/Guidance/ImmunisationGuidelinesforIreland2008-UpdatedSeptember2011/File,3077,en.pdf.

Exclusions: For risk groups until 7 days after onset of jaundice and/or symptoms.

Microbiological Clearance: None

Notifiable: to the local Medical Officer of Health.